

Use this checklist to install and test the Routermate Router Plus 56K CSU. For reference and additional information, see [Routermate Router Plus 56K CSU Installation and Operation \(918-6243\)](#). If you have any questions during installation, contact Osicom Technologies' Customer Service at (800) 359-2273.

☐ **Installation Checklist**

1. Prepare the site, including provision of a dedicated power outlet.
2. Verify that common carrier or customer-supplied DDS line is installed.
3. If you are going to use Frame Relay, obtain DLCI numbers from your carrier.
4. Obtain the console cable from your terminal vendor. The console cable should be a straight-through cable.
5. Obtain a 10BaseT LAN cable from your local cable supplier. See [Appendix C, Interfaces and Cables](#), for cables available from Osicom.
6. Obtain an IP address from your network administrator or Internet services provider. Default IP addresses are provided only for initial configuration.
7. If Novell IPX routing is used, obtain IPX network numbers from your network administrator. Also select the Frame Type used by the clients and servers on the LAN.

Default settings - The default settings allow you to get started quickly and easily with minimal configuration.

NOTE

If your application matches the default settings of IP routing over an unnumbered PPP link, then you only need to configure the CSU and configure the IP address and subnet mask on the LAN port.

☐ **Power Up**

Insert the power cord into the connector labeled **PWR**, then plug the wall-mount transformer into a dedicated outlet.

- The red **SYS** LED blinks momentarily during power-up, then goes out.
- If the **SYS** LED stays on, the unit has failed and is not operational. Disconnect and then re-connect the power cord. If the unit fails again, contact your dealer or Osicom Technologies.

☐ **Connect Terminal**

1. Use a straight-through RS-232 cable to connect a VT100-compatible terminal to the **CONSOLE** port on the front of the router. Power-on the terminal and configure the terminal as follows:
 - Rate: 9600 bps
 - Mode: full duplex
 - Character: 8 bits
 - Parity: none
 - Stop bits: 1
 - Flow control: DC1/DC3 (Xon/Xoff)
 - CR = CR

The Terminal Selection screen appears. If the Terminal Selection screen does not appear, type **[CTRL-N]**.

2. Type the letter for the type of terminal that is connected to the router; you are prompted for a password.
3. Type **[CR]**, the default password, to access the management screens. The Main Menu is displayed.

If the terminal displays garbled characters, press **[Ctrl-N]** to return to the Terminal Selection screen, where you can select a different terminal type.

☐ **Configure CSU**

The following default setting for the CSU is suitable for most applications. See the [CSU Configuration Menu in Chapter 5](#) of the manual for additional information.

Access the CSU Configuration screen and configure the following parameter:

Timing - Repeater (default)

☐ **Review Router Default Settings**

The following default settings will get you started quickly and easily with minimal configuration.

LAN interface:

Protocol: *Ethernet* (fixed)

Port 0 (LAN):

IP Address: 192.0.2.1
Subnet Mask: 255.255.255.0
IP Routing: *Enabled*
IPX Routing: *Disabled*
Bridging: *Disabled*

WAN Interface:

Protocol: *PPP* (Point-to-Point)

Port 1 (WAN):

IP Routing: *Enabled*
Mode: *Unnumbered*
IPX Routing: *Disabled*
Bridging: *Disabled*

Port 1 IP Address: 192.0.3.1 (Numbered Mode)
Subnet Mask: 255.255.255.0

Perform all the steps in the procedure if your application requires settings that are different from those above.

☐ **Configure Protocol for the WAN**

1. At the Main Menu, select **Configuration**; the Configuration Menu appears.
2. At the Configuration Menu, select **Interface Configuration** to display the Interface Configuration Summary screen.
3. At the Interface Configuration Summary screen, select **WAN 1** to access the WAN 1 Configuration screen.
4. Select the **Protocol**: *PPP* (default), *Frame Relay - Annex D*, or *Frame Relay - No LMI*.
5. Press **[X]** to return to the Main Menu (after responding **Yes** to the confirmation prompt).

☐ **Enable/Disable IP, IPX, Bridging for LAN**

1. At the Main Menu, select **Port Configuration**; the Port Configuration Summary screen appears.
2. Select **Port 0** to access the Port 0 Configuration screen.
3. At the Port 0 Configuration screen, set **IP Routing**, **IPX Routing**, and **Bridging** to *Enabled* or *Disabled*.

☐ **Configure IP, IPX Options for LAN**

At the Port 0 Configuration screen:

If IP Routing is *Enabled*:

1. Select **IP Routing Options** to access the Port 0 IP Routing Options screen.
2. Configure the **Address** (32-bit IP address). Get the IP address from the service provider or the network administrator. (Default = 192.0.2.1)
3. If IP subnetting is used, configure the **Subnet Mask** provided by your network administrator.
4. Configure **Frame Type** to match the type used on the LAN. The default is TYPE II, which is almost always used.
5. Press **[X]** to exit the screen (after responding **Yes** to the confirmation prompt).

If IPX Routing is *Enabled*:

1. Select **IPX Routing Options** to access the Port 0 IPX Routing Options screen.
2. Configure the **IPX Network Number** for the LAN. Get the network number from your network administrator.
3. Configure the **Frame Type** to match the type used by the clients and servers on the LAN.
4. Press **[X]** to exit the screen (after responding **Yes** to the confirmation prompt).

☐ **Enable/Disable IP, IPX, Bridging for WAN**

For Point-to-Point applications, configure the following for Port 1 only.

For Frame Relay applications, configure the following for each port 1-14 as required.

At the Port Configuration Summary screen:

1. Select the desired port number (1-14) to access the configuration screen for that particular port.
2. Set **IP Routing**, **IPX Routing**, and **Bridging** to *Enabled* or *Disabled*.

3. *Frame Relay only:* Configure **DLCI** to the DLCI for this port. Get DLCI numbers from your network administrator or Frame Relay service provider.
4. *Frame Relay only:* verify **Encapsulation** is set for RFC1490 (default).
5. Press **[X]** to return to the Port Configuration Summary screen (after responding **Yes** to the confirmation prompt).

☐ **Configure IP, IPX Options for WAN**

For Point-to-Point applications, configure the following for Port 1.

For Frame Relay applications, configure the following for each port for which a DLCI was configured.

At the Port Configuration screen for the individual port:

If IP Routing is Enabled:

1. Select the desired port number to access the configuration screen for that particular port.
2. Select **IP Routing Options** to display the IP Routing Options screen for the individual port.
3. Configure the **Address**. Get the IP address from the Internet services provider or the network administrator. (Default = 192.0.3.1)
4. If IP subnetting is used, configure the **Subnet Mask** provided by your network administrator.

For Frame Relay applications:

5. If the remote router requires it, enable **Inverse ARP** on the port IP Routing Options screen. The Routermate Plus does not require Inverse ARP (default is disabled).
6. Press **[X]** to exit the screen (after responding **Yes** to the confirmation prompt).

If IPX Routing is Enabled:

1. Select the desired port number to access the configuration screen for that particular port.
2. Select **IPX Routing Options** to display the IPX Routing Options screen for the individual port.
3. Configure the **IPX Network Number** for the LAN. Get the network number from the network administrator.
4. Enable or Disable **IPXWAN** to match the router on the other end of the WAN link. Support for IPXWAN is only provided to allow the router to be compatible with Novell routers. It is not required to route IPX and should be disabled unless it is required. The default is disabled.

For Frame Relay applications:

5. If the remote router requires it, enable **Inverse ARP** on the port IPX Routing Options screen. The Routermate Plus does not require Inverse ARP (default is disabled).
6. Return to the Main Menu (after responding **Yes** to the confirmation prompt).

☐ **Save Configuration to Flash**

When your configuration has been implemented and checked out to be satisfactory, return to the Main Menu and select **Save to Flash**; a prompt will appear to confirm your selection.

If the new configuration is not satisfactory, power cycle the router (off-on) before saving it to restore the original configuration.

☐ **Attach LAN and WAN Cables**

1. Use cable 115-0414-004, included with the unit, to connect the **WAN 1** interface to the network.
2. Use a customer-supplied 10BaseT drop cable to connect the **10BaseT** interface to the LAN.

You are now ready to pass data. Refer to the following chapters for detailed information on configuration and management screens.

- [Chapter 5: Configuration](#)
- [Chapter 8: Unit Configuration](#)
- [Chapter 9: Management Configuration](#)

☐ **Test CSU**

After all the cables are connected and you have completed the initial software configuration, the Routermate Router Plus 56K CSU should be able to communicate with the DDS network. Verify this as follows:

1. At the Main Menu, select **Status and Test**.
2. At the CSU Status and Test screen, check the **Line Status** field. One or more of the following conditions can appear, depending on the current operating mode.

Data Mode - the CSU is receiving user's data from the remote unit.

Idle - the DDS line is active but no data is being received.

No Signal - no inbound signal detected for more than 32 clock cycles (0.8 mS at 56,000 bps).

OOS/OOF - the CSU is receiving the Out-of-Service (OOS) or Out-of-Frame (OOF) signal from the Telco.

CSU Loop - a test initiated by the Telco at the user's request. A polarity reversal of the sealing current on the Telco line causes a loopback through the CSU section of the unit.

DSU Loop - a test initiated by the Telco at your request. An inband test pattern sent by the Telco causes a loopback similar to the Digital Loop to occur.

The Line Status field should indicate **Idle** or **Data Mode**.

If the Line Status field displays **OOS/OOF**, it indicates a network problem.

If the Line Status field displays **No Signal**, perform a Local Loop test to verify correct operation of the unit.

When the Local Loop test is set, the Line Status field should indicate **Data Mode**. If the Line Status field does not display **Data Mode** when Local Loop is set, it indicates a problem with the unit.

If the Line Status field displays **Data Mode** when Local Loop is set, but indicates **Loss of Signal** when the test is cleared, it indicates a problem with the network.

See manual [Chapter 4, Status and Test](#), for additional information.

☐ **Telnet**

The following steps describe how to telnet to the default IP address of the Routermate's LAN interface.

1. Connect the Routermate to the LAN.
2. Connect the telnet device to the same LAN.
3. Configure the telnet device with an IP address that has the same network number as the default IP address of the Routermate's LAN interface, as follows:
 - The router's default LAN IP address is 192.0.2.1.
 - Configure the IP address of the telnet device as 192.0.2.*host number*.
4. From the telnet device, enter: `telnet<space><192.0.2.1>`

After configuring the router, re-configure the router's LAN and WAN interfaces with the IP addresses assigned by your network administrator. When you re-configure the IP address for the interface to which the Telnet session is connected, the Telnet session is interrupted. You can then establish a new connection, if you wish, to the newly-configured address.

NOTE

The default IP addresses are only to facilitate initial configuration by remote access. They cannot be used as the permanent IP addresses.

☐ **SNMP**

There are two MIBs for SNMP management:

- CSU - Configure and monitor CSU parameters.
- Encryption - Configure encryption options.

Set the Read-Only and Read/Write community strings for the SNMP management station to match those of the router. For security reasons, router community strings cannot be configured from an SNMP workstation. Configure the router's community strings at the [Management screen \(Chapter 9\)](#).

SNMP R/O Community - *public*

SNMP R/W Community - *private*